

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 4 and 14 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by US 6,482,556 to Ohno et al., herein referred to as Ohno.

Regarding claim 4 Ohno discloses in figures 1 - 7, ***a display apparatus comprising: a fluorescent screen*** (10 in fig. 1 referred to as a "Thermosensitive Film" in column 5 lines 17 – 24) ***including a color-filter layer*** (4 in fig. 1 referred to as a "color filter layer" in column 5 lines 17 – 24) ***and a phosphor layer*** (5 in fig. 1 referred to as a "phosphor layer" in column 5 lines 17 – 24), ***which is formed on the inside surface of a panel glass*** (1 in fig. 2A referred to as a "panel glass" in column 6 lines 15 – 20) ***and in which said phosphor layer is formed by a transfer method*** (refer to column 6 lines 34 – column 7 lines 25 for discussion of transfer method) ***using a photosensitive phosphor layer containing no Cr*** (refer to column 5 lines 65 – 68)

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and a film thickness of the phosphor layer is 10 μm to 15 μm (column 5 lines 35 – 40).

Regarding claim 14 Ohno discloses in figures 1 - 7 **A color cathode-ray tube** (column 1 lines 12—16) **comprising: a fluorescent screen** (10 in fig. 1 referred to as a "Thermosensitive Film" in column 5 lines 17 – 24) **including a color-filter layer** (4 in fig. 1 referred to as a "color filter layer" in column 5 lines 17 – 24) **and a phosphor layer** (5 in fig. 1 referred to as a "phosphor layer" in column 5 lines 17 – 24), **which is formed on the inside surface of a panel glass** (1 in fig. 2A referred to as a "panel glass" in column 6 lines 15 – 20) **and in which said phosphor layer is formed by a transfer method** (refer to column 6 lines 34 – column 7 lines 25 for discussion of transfer method) **using a photosensitive phosphor layer containing no Cr** (refer to column 5 lines 65 – 68) **and a film thickness of the phosphor layer is 10 μm to 15 μm** (refer to column 5 lines 35 – 40).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1 – 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Grant Publication 2001/0020817 to Inoue et al., herein referred to as Inoue, and further in view of U.S. Patent 6,482,556 to Ohno et al., herein referred to as Ohno.

Regarding claim 1 Inoue discloses in figure 13, **a display apparatus comprising: a fluorescent screen including a phosphor layer** (13, refer to page 8 paragraph [0105]), **which is formed on the inside surface of a panel glass** (6, refer to page 7 paragraph [0093]) **having light transmissivity of 55% to 20% when a wavelength is 546 nm** (refer to page 7 paragraph [0093]), but fails to disclose **a plate thickness is 20 mm, and a fluorescent screen including a color-filter layer**. While Inoue does not specifically disclose a plate thickness of 20 mm he does teach a panel glass plate having a thickness of 10.16 mm. Refer to MPEP § 2144.04 where it states the change in size is unpatentable over prior art.

Ohno discloses a fluorescent screen including a color-filter layer (4) and in which at least said phosphor layer (5) column 5 lines 35 – 40. Ohno gives motivation to combine with a CRT in column 2 lines 7 – 19 where it states a color filter and can

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enhance the color purity and contrast can largely be improved. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to combine Inoue CRT with Ohno color filter and phosphor to surmount the common problems of build a CRT.

Further the statement “***and in which at least said phosphor layer is formed by a transfer method***” is a “**product by process**” phrase. Initially, with respect to claims a “**product by process**” claim is directed to the product per se, no matter how actually made, In re Hirao, 190 USPQ 15. See also In re Brown, 173 USPQ 685; In re Luck, 177 USPQ 523; In re Fessmann, 180 USPQ 324; In re Avery, 186 USPQ 161; In re Wertheim, 191 USPQ 90 (209 USPQ 554, does not deal with this issue); In re Fitzgerald 205 USPQ 594, 596 (CCPA); In re Marosi et al , 218 USPQ 289 (CAFC); and In re Thorpe et al, 227 USPQ 964 (CAFC, 1985) all of which make it clear that it is the patentability of the final product per se which must be determined in a “**product by process**” claim, and not the patentability of the process, and that, as here, an old or obvious product produced by a new method is not patentable as a product, whether claimed in “product by process” claims or not. Note that applicant has the burden of proof in such cases, as the above case law makes clear.

Regarding claim 2 Inoue discloses and Ohno teaches, ***a display apparatus according to claim 1, wherein the fluorescent screen is provided in which either an intermediate film*** (3, Ohno in figure 1 column 5 lines 17 – 24) ***or a metal-back layer on the phosphor layer*** (4).

Further the statement ***“both the intermediate film and the metal-back layer are formed by the transfer method”*** is a **“product by process”** claim. Initially, with respect to claims a **“product by process”** claim is directed to the product per se, no matter how actually made, In re Hirao, 190 USPQ 15. See also In re Brown, 173 USPQ 685; In re Luck, 177 USPQ 523; In re Fessmann, 180 USPQ 324; In re Avery, 186 USPQ 161; In re Wertheim, 191 USPQ 90 (209 USPQ 554, does not deal with this issue); In re Fitzgerald 205 USPQ 594, 596 (CCPA); In re Marosi et al , 218 USPQ 289 (CAFC); and In re Thorpe et al, 227 USPQ 964 (CAFC, 1985) all of which make it clear that it is the patentability of the final product per se which must be determined in a **“product by process”** claim, and not the patentability of the process, and that, as here, an old or obvious product produced by a new method is not patentable as a product, whether claimed in "product by process" claims or not. Note that applicant has the burden of proof in such cases, as the above case law makes clear.

Regarding claim 3 Inoue discloses and Ohno teaches, ***a display apparatus according to claim 1, wherein the fluorescent screen on which the metal-back layer*** (3, “adhesive layer” Ohno in figure 1 column 5 lines 17 – 24) ***is directly formed by the transfer method is provided.*** Even though Ohno never states explicitly what material is used to form layer 3. The paragraphs the Examiner cites have as layer (3) as a metal-back layer because the only stipulation on what (3) can be is that it is photosensitive and can be patterned and cover layer 8 is peeled off column 5 lines 35 – 43. The examiner submits that Indium Tin Oxide (ITO) satisfy all the requirements for

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the metal back layer and presents the article by Y. N. Kim et al., "Adhesive and Wear properties of Indium Tin Oxide (ITO) Thin Films Deposited by RF Magnetron Sputter" (which is on order and will be provided at later date). This article is cited as evidence that ITO has adhesive properties and is a metal back layer.

Further the statement ***"the metal-back layer is formed by the transfer method"*** is a **"product by process"** claim. Initially, with respect to claims a **"product by process"** claim is directed to the product per se, no matter how actually made, In re Hirao, 190 USPQ 15. See also In re Brown, 173 USPQ 685; In re Luck, 177 USPQ 523; In re Fessmann, 180 USPQ 324; In re Avery, 186 USPQ 161; In re Wertheim, 191 USPQ 90 (209 USPQ 554, does not deal with this issue); In re Fitzgerald 205 USPQ 594, 596 (CCPA); In re Marosi et al , 218 USPQ 289 (CAFC); and In re Thorpe et al, 227 USPQ 964 (CAFC, 1985) all of which make it clear that it is the patentability of the final product per se which must be determined in a **"product by process"** claim, and not the patentability of the process, and that, as here, an old or obvious product produced by a new method is not patentable as a product, whether claimed in "product by process" claims or not. Note that applicant has the burden of proof in such cases, as the above case law makes clear.

Claims 6 – 8, are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Grant Publication 2001/0020817 to Inoue et al., herein referred to as Inoue, U.S. Patent 6,482,556 to Ohno et al., herein referred to as Ohno, as applied to 1, 2 or 3

as above, and further in view of U.S. Patent Grant Publication 2002/0027411 to Bae et al. herein refer to as Bae.

Regarding claim 6 Inoue discloses and Ohno teaches, ***a display apparatus according to claim 1***, but they fail to teach ***wherein an antireflective film is formed on the outside surface of said panel glass***. Bae teaches on page 3 paragraph [0044] an antireflective film (32) formed on the outside of the panel glass of the CRT. Bae provides motivation to combine with the previously defined CRT on page 1 paragraph [0012] in which he states the adding this layer will provide a CRT which the entire area of the viewing screen is uniformly illuminated. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to combine Inoue's CRT and Ohno's phosphor with Bea's antireflective film to construct a CRT that has a uniformly illuminated film.

Regarding claim 7 Inoue discloses and Ohno teaches, ***a display apparatus according to claim 2***, but they fail to teach ***wherein an antireflective film is formed on the outside surface of said panel glass***. Bae teaches on page 3 paragraph [0044] an antireflective film (32) formed on the outside of the panel glass.

Regarding claim 8 Inoue discloses and Ohno teaches, ***A display apparatus according to claim 3, wherein an antireflective film is formed on the outside***

surface of said panel glass. Bae teaches on page 3 paragraph [0044] an antireflective film (32) formed on the outside of the panel glass.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,482,556 to Ohno et al., herein referred to as Ohno, as applied to claim 4 above, and further in view of U.S. Patent Grant Publication 2001/0020817 to Inoue et al., herein referred to as Inoue.

Regarding claim 5 Ohno discloses in figures 1 – 7, **a display apparatus according to claim 4**, but fails to teach **wherein as said panel glass, a panel glass having light transmissivity of 55% to 20% when a wavelength is 546 nm and a plate thickness is 20 mm is employed.** Inoue teaches **a panel glass** (6, refer to page 7 paragraph [0093]) **having light transmissivity of 55% to 20% when a wavelength is 546 nm** (refer to page 7 paragraph [0093]), but fails to disclose **a plate thickness is 20 mm.** Inoue gives motivation to combine Ohno's "Thermosensitive Film" with Inoue panel glass on page 2 paragraph [0022] where he states that the manufacture of such panel glass with a film layer will make "it possible to uniformize brightness on the entire screen." It would have been obvious to one of ordinary skill in the art, at the time of the invention, to combine Inoue's CRT with Ohno's "Thermosensitive Film" to surmount the common problems of build a CRT.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,482,556 to Ohno et al., herein referred to as Ohno, as applied to claim 4 above, and further in view of U.S. Patent Grant Publication 2001/0020817 to Inoue et al., herein referred to as Inoue, and further in view of U.S. Patent Grant Publication 2002/0027411 to Bae et al. herein refer to as Bae.

Regarding claim 9 Ohno disclose, ***a display apparatus according to claim 4***, but fails to teach ***wherein an antireflective film is formed on the outside surface of said panel glass***. Bae teaches on page 3 paragraph [0044] an antireflective film (32) formed on the outside of the panel glass. Bae provides motivation to combine with the previously defined CRT on page 1 paragraph [0012] in which he states the adding this layer will provide a CRT which the entire area of the viewing screen is uniformly illuminated. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to combine Ohno "Thermosensitive Film" with Bea's antireflective film to construct a CRT that has a uniformly illuminated film.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,482,556 to Ohno et al., herein referred to as Ohno, as applied to claim 5 above, and further in view of U.S. Patent Grant Publication 2001/0020817 to Inoue et al., herein referred to as Inoue, and further in view of U.S. Patent Grant Publication 2002/0027411 to Bae et al. herein refer to as Bae.

Regarding claim 10 Ohno discloses and Inoue teaches, **a display apparatus according to claim 5**, but fails to teach **wherein an antireflective film is formed on the outside surface of said panel glass**. Bae teaches on page 3 paragraph [0044] an antireflective film (32) formed on the outside of the panel glass. Bae provides motivation to combine with the previously defined CRT on page 1 paragraph [0012] in which he states the adding this layer will provide a CRT which the entire area of the viewing screen is uniformly illuminated. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to combine Inoue's CRT and Ohno's phosphor with Bae's antireflective film to construct a CRT that has a uniformly illuminated film.

Claims 11 – 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Grant Publication 2001/0020817 to Inoue et al., herein referred to as Inoue, and further in view of U.S. Patent 6,482,556 to Ohno et al., herein referred to as Ohno.

Regarding claim 11 Inoue discloses in figure 13, **a color cathode-ray tube** (column 1 lines 12—16) **comprising: a fluorescent screen including a phosphor layer** (13, refer to page 8 paragraph [0105]), **which is formed on the inside surface of a panel glass** (6, refer to page 7 paragraph [0093]) **having light transmissivity of 55% to 20% when a wavelength is 546 nm** (refer to page 7 paragraph [0093]), but fails to disclose **a plate thickness is 20 mm, and a fluorescent screen including a color-filter layer**. While Inoue does not specifically disclose a plate thickness of 20 mm

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he does teach a panel glass plate having a thickness of 10.16 mm. Refer to MPEP § 2144.04 where it states the change in size is unpatentable over prior art.

Ohno discloses a fluorescent screen including a color-filter layer (4) and in which at least said phosphor layer (5) column 5 lines 35 – 40. Ohno gives motivation to combine with a CRT in column 2 lines 7 – 19 where it states a color filter and can enhance the color purity and contrast can largely be improved. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to combine Inoue CRT with Ohno color filter and phosphor to surmount the common problems of build a CRT.

Further the statement “***and in which at least said phosphor layer is formed by a transfer method***” is a “**product by process**” phrase. Initially, with respect to claims a “**product by process**” claim is directed to the product per se, no matter how actually made, In re Hirao, 190 USPQ 15. See also In re Brown, 173 USPQ 685; In re Luck, 177 USPQ 523; In re Fessmann, 180 USPQ 324; In re Avery, 186 USPQ 161; In re Wertheim, 191 USPQ 90 (209 USPQ 554, does not deal with this issue); In re Fitzgerald 205 USPQ 594, 596 (CCPA); In re Marosi et al , 218 USPQ 289 (CAFC); and In re Thorpe et al, 227 USPQ 964 (CAFC, 1985) all of which make it clear that it is the patentability of the final product per se which must be determined in a “**product by process**” claim, and not the patentability of the process, and that, as here, an old or obvious product produced by a new method is not patentable as a product, whether claimed in “product by process” claims or not. Note that applicant has the burden of proof in such cases, as the above case law makes clear.

Regarding claim 12 Inoue discloses and Ohno teaches, ***a color cathode-ray tube according to claim 11, wherein the fluorescent screen is provided in which either an intermediate film*** (3, Ohno in figure 1 column 5 lines 17 – 24) ***or a metal-back layer on the phosphor layer*** (4).

Further the statement ***“both the intermediate film and the metal-back layer are formed by the transfer method”*** is a **“product by process”** claim. Initially, with respect to claims a **“product by process”** claim is directed to the product per se, no matter how actually made, In re Hirao, 190 USPQ 15. See also In re Brown, 173 USPQ 685; In re Luck, 177 USPQ 523; In re Fessmann, 180 USPQ 324; In re Avery, 186 USPQ 161; In re Wertheim, 191 USPQ 90 (209 USPQ 554, does not deal with this issue); In re Fitzgerald 205 USPQ 594, 596 (CCPA); In re Marosi et al , 218 USPQ 289 (CAFC); and In re Thorpe et al, 227 USPQ 964 (CAFC, 1985) all of which make it clear that it is the patentability of the final product per se which must be determined in a **“product by process”** claim, and not the patentability of the process, and that, as here, an old or obvious product produced by a new method is not patentable as a product, whether claimed in "product by process" claims or not. Note that applicant has the burden of proof in such cases, as the above case law makes clear.

Regarding claim 13 Inoue discloses and Ohno teaches, ***a color cathode-ray tube according to claim 11, wherein the fluorescent screen on which the metal-back layer*** (3, “adhesive layer” Ohno in figure 1 column 5 lines 17 – 24) ***is directly***

formed by the transfer method is provided. Even though Ohno never states explicitly what material is used to form layer 3. The paragraphs the Examiner cites have as layer (3) as a metal-back layer because the only stipulation on what (3) can be is that it is photosensitive and can be patterned and cover layer 8 is peeled off column 5 lines 35 – 43. The examiner submits that Indium Tin Oxide (ITO) satisfy all the requirements for the metal back layer and presents the article by Y. N. Kim et al., “Adhesive and Wear properties of Indium Tin Oxide (ITO) Thin Films Deposited by RF Magnetron Sputter” (which is on order and will be provided at later date). This article is cited as evidence that ITO has adhesive properties and is a metal back layer.

Further the statement **“the metal-back layer is formed by the transfer method”** is a **“product by process”** claim. Initially, with respect to claims a **“product by process”** claim is directed to the product per se, no matter how actually made, In re Hirao, 190 USPQ 15. See also In re Brown, 173 USPQ 685; In re Luck, 177 USPQ 523; In re Fessmann, 180 USPQ 324; In re Avery, 186 USPQ 161; In re Wertheim, 191 USPQ 90 (209 USPQ 554, does not deal with this issue); In re Fitzgerald 205 USPQ 594, 596 (CCPA); In re Marosi et al , 218 USPQ 289 (CAFC); and In re Thorpe et al, 227 USPQ 964 (CAFC, 1985) all of which make it clear that it is the patentability of the final product per se which must be determined in a **“product by process”** claim, and not the patentability of the process, and that, as here, an old or obvious product produced by a new method is not patentable as a product, whether claimed in “product by process” claims or not. Note that applicant has the burden of proof in such cases, as the above case law makes clear.

Claims 16 – 18, are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Grant Publication 2001/0020817 to Inoue et al., herein referred to as Inoue, U.S. Patent 6,482,556 to Ohno et al., herein referred to as Ohno, as applied to 11, 12 or 13 as above, and further in view of U.S. Patent Grant Publication 2002/0027411 to Bae et al. herein refer to as Bae.

Regarding claim 16 Inoue discloses and Ohno teaches, ***a color cathode-ray tube according to claim 11***, but they fail to teach ***wherein an antireflective film is formed on the outside surface of said panel glass***. Bae teaches on page 3 paragraph [0044] an antireflective film (32) formed on the outside of the panel glass. Bae provides motivation to combine with the previously defined CRT on page 1 paragraph [0012] in which he states the adding this layer will provide a CRT which the entire area of the viewing screen is uniformly illuminated. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to combine Inoue's CRT and Ohno's phosphor with Bae's antireflective film to construct a CRT that has a uniformly illuminated film.

Regarding claim 17 Inoue discloses and Ohno teaches, ***a color cathode-ray tube according to claim 12***, but they fail to teach ***wherein an antireflective film is formed on the outside surface of said panel glass***. Bae teaches on page 3 paragraph [0044] an antireflective film (32) formed on the outside of the panel glass.

Regarding claim 18 Inoue discloses and Ohno teaches, ***a color cathode-ray tube according to claim 13, wherein an antireflective film is formed on the outside surface of said panel glass.*** Bae teaches on page 3 paragraph [0044] an antireflective film (32) formed on the outside of the panel glass.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,482,556 to Ohno et al., herein referred to as Ohno, as applied to claim 14 above, and further in view of U.S. Patent Grant Publication 2001/0020817 to Inoue et al., herein referred to as Inoue.

Regarding claim 15 Ohno discloses in figures 1 – 7, ***a color cathode-ray tube according to claim 14***, but fails to teach ***wherein as said panel glass, a panel glass having light transmissivity of 55% to 20% when a wavelength is 546 nm and a plate thickness is 20 mm is employed.*** Inoue teaches ***a panel glass*** (6, refer to page 7 paragraph [0093]) ***having light transmissivity of 55% to 20% when a wavelength is 546 nm*** (refer to page 7 paragraph [0093]), but fails to disclose ***a plate thickness is 20 mm.*** Inoue gives motivation to combine Ohno's "Thermosensitive Film" with Inoue panel glass on page 2 paragraph [0022] where he states that the manufacture of such panel glass with a film layer will make "it possible to uniformize brightness on the entire screen." It would have been obvious to one of ordinary skill in the art, at the time of the

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invention, to combine Inoue's CRT with Ohno's "Thermosensitive Film" to surmount the common problems of build a CRT.

Claims 19, 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,482,556 to Ohno et al., herein referred to as Ohno, as applied to claim 14 above, or/and further in view of U.S. Patent Grant Publication 2001/0020817 to Inoue et al., herein referred to as Inoue, as applied to claim 5, and further in view of U.S. Patent Grant Publication 2002/0027411 to Bae et al. herein refer to as Bae.

Regarding claim 19 Ohno disclose, ***a color cathode-ray tube according to claim 14***, but fails to teach ***wherein an antireflective film is formed on the outside surface of said panel glass***. Bae teaches on page 3 paragraph [0044] an antireflective film (32) formed on the outside of the panel glass. Bae provides motivation to combine with the previously defined CRT on page 1 paragraph [0012] in which he states the adding this layer will provide a CRT which the entire area of the viewing screen is uniformly illuminated. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to combine Ohno's "Thermosensitive Film" with Bea's antireflective film to construct a CRT that has a uniformly illuminated film.

Regarding claim 20 Ohno discloses and Inoue teaches, ***a color cathode-ray tube according to claim 15***, but fails to teach ***wherein an antireflective film is formed on the outside surface of said panel glass***. Bae teaches on page 3

paragraph [0044] an antireflective film (32) formed on the outside of the panel glass.

Bae provides motivation to combine with the previously defined CRT on page 1 paragraph [0012] in which he states the adding this layer will provide a CRT which the entire area of the viewing screen is uniformly illuminated. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to combine Inoue's CRT and Ohno's phosphor with Bea's antireflective film to construct a CRT that has a uniformly illuminated film.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron Williams whose telephone number is (571) 270-5279. The examiner can normally be reached on Monday thru Friday 7:00 to 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Brewster can be reached on (571)272-1854. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Aaron Williams/
Examiner, Art Unit 4135

/William M. Brewster/
Supervisory Patent Examiner, Art Unit 4135